

**We Claim:**

1. A method for use in a node of a network during a connection setup between a source node and a destination node, the method comprising the steps of:  
initiating a cross-connect with an adjacent node; and  
completing the cross-connect with the adjacent node without waiting for  
5 completion of any downstream cross-connects.
2. The method according to claim 1, further comprising the step of sending a connection setup message to the adjacent node before completion of the cross-connect.
- 10 3. The method according to claim 1, wherein the network is an optical transport network.
4. The method according to claim 3, wherein the cross-connect is  
15 selected from the group consisting of an electrical-based cross-connect and a transparent wavelength-based optical cross-connect.
5. The method according to claim 1, wherein the connection setup is selected from the group consisting of a wavelength-based connection setup, a SONET-based connection setup, a SDH-based connection setup, and a PDH-based  
20 connection setup.
6. A method for use in a node of a network during a connection setup between a source node and a destination node, the connection setup comprising a  
25 forward pass of signaling messages from the source node to the destination node and a reverse pass of signaling messages from the destination node to the source node, the method comprising the steps of:  
initiating a cross-connect with an adjacent node on the forward pass of the connection setup; and  
30 checking if the cross-connect was successful on the reverse pass of the connection setup.
7. The method according to claim 6, wherein the forward pass and reverse pass of signaling messages occurs out-of-band.

8. The method according to claim 6, wherein the forward pass and reverse pass of signaling messages occurs in-band.

9. A method for use in a node of a network during a connection setup  
5 between a source node and a destination node, the method comprising the steps of:  
receiving a connection setup message from an upstream node;  
performing a cross-connect with a downstream node prior to receipt of a  
signaling message related to a status of at least one cross-connect operation  
performed at a downstream node.

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10. A method for use in a node of a network during a connection setup  
between a source node and a destination node, the method comprising the steps of:  
receiving a connection setup message from an upstream node;  
responsive to the received connection setup message, executing a cross-  
15 connect with a downstream node; and  
sending a connection setup message to the downstream node, whereby a  
cross-connect at the downstream node is initiated.

11. Apparatus comprising:  
20 a communications interface for providing signaling to a downstream node and  
for receiving signaling from an upstream node; and  
a processor, responsive to receipt of a connection setup message from the  
upstream node, for performing a cross-connect with the downstream node prior to  
receipt of a signaling message from the downstream node related to a status of at  
25 least other cross-connect operation related to the connection setup.

12. The apparatus according to claim 11, wherein the upstream node and  
the downstream node are in an optical transport network.

13. The apparatus according to claim 12, wherein the cross-connect is  
30 selected from the group consisting of an electrical-based cross-connect and a  
transparent wavelength-based optical cross-connect.

14. The apparatus according to claim 11, wherein the connection setup is  
35 selected from the group consisting of a wavelength-based connection setup, a  
SONET-based connection setup, a SDH-based connection setup, and a PDH-based

connection setup.

**15.** The apparatus according to claim 11, wherein the signaling occurs out-of-band.

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**16.** The apparatus according to claim 11, wherein the signaling occurs in-band.

10           **17. Apparatus comprising:**  
a communications interface for receiving signaling from an upstream node on a forward pass of a connection setup and receiving signaling from a downstream node on a reverse pass of the connection setup; and

15 a processor for initiating a cross-connect with the downstream node on the forward pass, and for checking if the cross-connect was successful on the reverse pass.

18. Apparatus comprising:

a communications interface for receiving a connection setup message from an upstream node; and

20 a processor for executing a cross-connect with a downstream node and for sending, through the communications interface, a connection setup message to the downstream node, whereby a cross-connect at the downstream node is initiated.

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